

WHAT IS CLAIMED IS:

1 1. An electrosurgical probe for treating a target tissue at a
2 surgical site, comprising:
3 a shaft having a shaft distal end and a shaft proximal end; and
4 an electrode assembly disposed on the shaft, wherein the electrode
5 assembly includes an electrically insulating electrode support and at least one active
6 electrode terminal arranged on the electrode support, each of the at least one active
7 electrode terminal having an electrode lumen therethrough, wherein the electrode
8 lumen is adapted for removing unwanted materials from the surgical site.

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1 2. The probe of claim 1, wherein the electrode lumen is in
2 communication with a vacuum source.

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1 3. The probe of claim 1, wherein the electrode lumen forms part
2 of an aspiration unit.

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1 4. The probe of claim 1, wherein the at least one active electrode
2 terminal includes a working end, and the electrode lumen terminates in an electrode
3 port at the working end.

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1 5. The probe of claim 4, wherein the electrode support includes a
2 suction cavity.

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1 6. The probe of claim 5, wherein the at least one active electrode
2 terminal includes a suction opening, the suction opening in communication with the
3 suction cavity of the electrode support.

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1 7. The probe of claim 6, wherein the suction opening comprises
2 a slit.

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1 8. The probe of claim 7, wherein the at least one active electrode
2 terminal comprises a body having a wall, and the slit is arranged longitudinally in
3 the wall.

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9. The probe of claim 7, wherein the slit is continuous with the electrode port.

10. The probe of claim 7, wherein the suction opening further comprises a window.

11. The probe of claim 6, wherein the suction opening extends from the working end of the at least one active electrode terminal to the suction cavity of the electrode support.

12. The probe of claim 6, wherein the suction opening causes preferential flow of an aspiration stream at a first region of the working end.

13. The probe of claim 12, wherein the suction opening defines the first region and a second region, wherein the first region is characterized by a higher flow rate of the aspiration stream than the second region.

14. The probe of claim 13, wherein the first region lies at or adjacent to the suction opening, and the second region lies substantially opposite the suction opening.

15. The probe of claim 13, wherein the second region is a shielded region which promotes the generation and maintenance of a plasma at the working end of the at least one active electrode terminal.

16. The probe of claim 13, wherein the preferential flow of the aspiration stream in the first region promotes the generation and maintenance of a plasma at the second region.

17. The probe of claim 4, further comprising an aspiration unit including an aspiration lumen.

1 18. The probe of claim 17, wherein the aspiration lumen lies
2 within the shaft.

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1 19. The probe of claim 17, wherein the aspiration lumen is
2 coupled at its proximal end to an aspiration tube.

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1 20. A method of treating a target tissue at a surgical site,
2 comprising:

3 a) providing an electrosurgical probe having an active electrode
4 assembly and a return electrode, the active electrode assembly comprising at least
5 one active electrode terminal, the at least one active electrode terminal including a
6 body, the body having a wall defining an electrode lumen, and the wall having a
7 suction opening therein;

8 b) positioning the active electrode assembly in at least close proximity
9 to the target tissue; and

10 c) applying a high frequency voltage between the at least one active
11 electrode terminal and the return electrode, wherein at least a portion of the target
12 tissue is ablated or modified.